

Factors associated with the lifestyle of state basic education teachers of state during the pandemic

Fatores associados ao estilo de vida dos professores da educação básica estadual na pandemia

Factores asociados al estilo de vida de los docentes de educación básica estatal durante la pandemia

Alexandre dos Reis Vieira^a 

Jorge Luiz Bento de Andrade Junior^a 

Lucas Linhares Costa^a 

Rafaela Borges Teixeira^a 

Vinicius de Paula Arruda Vieira^a 

Tatiana Almeida de Magalhães^b 

Nayra Suze Souza e Silva^b 

Desirée Sant'Ana Haikal^b 

Rosângela Ramos Veloso Silva^c 

Lucinéia de Pinho^c 

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ABSTRACT

Objective: To analyze the prevalence and factors associated with the lifestyle profile of public basic education teachers in Minas Gerais during the COVID-19 pandemic.

Method: Epidemiological websurvey carried out with public basic education teachers in Minas Gerais. Data collection took place from August to September 2020 via digital form. Anthropometric, sociodemographic, work, and lifestyle characteristics were evaluated. Poisson Regression was used.

Results: 15,641 teachers participated and 31.1% had inadequate health habits. There was a higher prevalence among men (PR=1.38; 95%CI:1.31;1.45), older age (PR=1.20; 95%CI: 1.07;1.34), greater weekly workload (RP=1.10; 95%CI:1.03;1.17) and those dissatisfied with work (RP=1.21; 95%CI:1.15;1.27). As a protective factor, professors with longer teaching experience (RP=0.92; 95%CI:0.87;0.98) and those hired or appointed (PR=0.89; 95%CI:0.85) ;0.94).

Conclusion: Lifestyle inadequacy was found among older male teachers, with longer working hours and job dissatisfaction.

Descriptors: Coronavirus. Faculty. Risk factors. Health profile. Occupational health.

RESUMO

Objetivo: Analisar a prevalência e fatores associados ao perfil do estilo de vida dos professores da educação básica pública de Minas Gerais na pandemia da COVID-19.

Método: Inquérito epidemiológico websurvey realizado com professores da educação básica pública de Minas Gerais. A coleta de dados ocorreu de agosto a setembro/2020 via formulário digital. Foram avaliadas as características antropométricas, sociodemográficas, laborais e estilo de vida. Utilizou-se a Regressão de Poisson.

Resultados: Participaram 15.641 professores e 31,1% apresentaram hábitos inadequados de saúde. Houve maior prevalência entre homens (RP=1,38; IC_{95%}:1,31;1,45), maior idade (RP=1,20; IC_{95%}: 1,07;1,34), maior carga semanal de trabalho (RP=1,10; IC_{95%}:1,03;1,17) e os insatisfeitos com o trabalho (RP=1,21; IC_{95%}:1,15;1,27). Como fator de proteção encontraram-se os professores com mais tempo de trabalho docente (RP=0,92; IC_{95%}:0,87;0,98) e contratados ou designados (RP=0,89; IC_{95%}:0,85;0,94).

Conclusão: Verificou-se inadequação do estilo de vida entre os professores homens mais velhos, com maior jornada laboral e insatisfação com o trabalho.

Descritores: Coronavírus. Docentes. Fatores de risco. Perfil de saúde. Saúde ocupacional

RESUMEN

Objetivo: Analizar la prevalencia y los factores asociados al perfil de estilo de vida de los docentes de educación básica pública de Minas Gerais durante la pandemia de COVID-19.

Método: Encuesta epidemiológica de tipo websurvey realizada con profesores de educación básica pública en Minas Gerais. La recolección de datos ocurrió de agosto a septiembre 2020 a través de formulario digital. Se evaluaron características antropométricas, sociodemográficas, laborales y de estilo de vida. Se utilizó la Regresión de Poisson.

Resultados: Participaron 15.641 docentes y el 31,1% presentaba hábitos de salud inadecuados. Hubo mayor prevalencia en hombres (RP=1,38; IC 95%: 1,31;1,45), mayor edad (RP=1,20; IC 95%: 1,07;1,34), mayor carga de trabajo semanal (RP=1,10; IC 95%: 1,03) ;1,17) y los insatisfechos con el trabajo (RP=1,21; IC95%:1,15;1,27). Como factor protector, profesores con mayor experiencia docente (RP=0,92; IC95%:0,87;0,98) y contratados o nombrados (RP=0,89; IC95%:0,85;0,94).

Conclusión: Se encontró inadecuación en el estilo de vida entre los maestros hombres y mayores, con jornadas laborales más largas e insatisfacción laboral.

Descritores: Coronavirus. Docentes. Factores de riesgo. Perfil de salud. Salud laboral.

^a Centro Universitário FIPMoc (UNIFIPMoc). Curso de Medicina. Montes Claros, Minas Gerais, Brasil.

^b Universidade Estadual de Montes Claros (Unimontes). Programa de Pós-Graduação em Ciências da Saúde. Montes Claros, Minas Gerais, Brasil.

^c Universidade Estadual de Montes Claros (Unimontes). Programa de Pós-Graduação em Cuidado Primário em Saúde. Montes Claros, Minas Gerais, Brasil.

INTRODUCTION

A person's lifestyle can have impact their health and work performance. Teachers are more likely to develop health-related diseases, especially non-communicable chronic ones (NCCD). The presence of NCCD among these workers can be influenced by inadequate dietary habits, sedentary lifestyle, and smoking⁽¹⁾.

In the context of the COVID-19 pandemic, workers received recommendations to work from home⁽²⁾. With schools closed by the pandemic, teachers had to reformulate their pedagogical practices in a short period of time, adopting distance education. However, this overloaded some of these workers even more, as they were not prepared for this sudden change and the consequent advance of work demands into their private lives, even during their free time⁽³⁾. A new routine, marked by social isolation and increased work demands, risk factors for NCCDs were potentiated, which can further compromise the health of these workers^(4,5).

During the new coronavirus pandemic, virtual life became routine due to the need to isolate. This transformed the dynamic nature of daily activities which involved leaving home and moving around into a life connected to the internet, that is, a more sedentary and passive one⁽⁶⁾. As a result, we must consider the impact this had on the health and life of people, especially among professors, due to emotional alterations, including fear, insecurity, depressive humor, excessive concerns, anxiety, and panic attacks, changes which also led to sleep and agility alterations⁽⁷⁾.

A healthy lifestyle is important for teachers to develop their role in the school environment. Understanding factors associated with a teacher's lifestyle can contribute to implement measures to promote health and improve the work capacity of this professional category. Thus, the objective of this study was to analyze the prevalence and factors associated with the lifestyle profile of public basic education teachers in Minas Gerais, during the COVID-19 pandemic.

METHOD

This study was part of the ProfSMoc Project – Minas COVID Stage “Health Conditions and Work in Teachers of the State Education Network in the State of Minas Gerais during the COVID-19 pandemic”. This project sought to carry out a survey on the health and working conditions of teachers in state schools in Minas Gerais, in the context of the COVID-19 pandemic. It was carried out at Universidade Estadual de Montes Claros (UNIMONTES) and had the support of the

State Department of Education of Minas Gerais (SEE-MG) and the subsecretaria of higher education⁽⁸⁾.

This is an epidemiological web survey carried out according to recommendations from the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE). It was developed with basic education teachers (kindergarten, elementary education, and high school) of the state public school system of Minas Gerais, Brazil. In 2020, the state of Minas Gerais had 3,441 schools with approximately 90,000 teachers. The state had six centers, each subdivided in Regional Education Superintendencies (RES), which added up to a total of 45.

Since this is a web survey, researchers have no control over the sample size (since the period in which the data collection form would be active/available to receive responses was advertised). Nevertheless, a sample calculation was conducted to find out the minimum necessary “n”, ensuring that the population of teachers of Minas Gerais selected would have inferential power. We used a formula for infinite populations to calculate the sample size. We considered a prevalence of 50% in order to reach the largest sample size possible and, consequently, the largest inferential power possible for the different variables. The tolerable risk of error was 3%. The sample was duplicated ($Deff=2$), since these are conglomerates. We also added 20% to the sample size in order to compensate for potential losses (non-response rate). Thus, we estimated a minimum sample of 2,564 teachers. After the total size of the sample was estimated, its composition was calculated according to the relative participation of teachers in each teaching superintendency, in order to guarantee a minimum proportionality per state region.

A pilot study with 20 teachers from five municipalities was carried out to test and adjust the data collection instrument, and to estimate the time required to fill it in. The participants of the pilot study were excluded from the final data collection, which took place from August 20 to September 11, 2020. During this period (five months after the first COVID-19 case in Minas Gerais, March 8, 2020), Brazilian states were dealing with severe social distancing measures aimed at containing the expansion of the pandemic. These measures included remote work, the prohibition of events with high numbers of people, and restrictions to enter and exit airports, bus stations, and borders, in addition to the closing of teaching institutions (both public and private), not to mention the mandatory use of masks.

Data collection was carried out through a digital online form, made available on the platform Google Forms®. A link to the form was sent to the institutional email of all teachers in

the state by the State Department of Education (SEE-MG). To avoid the automatic completion of the form by computerized systems, we used a reCAPTCHA, which asked the participant to answer tests with images that prevented it from being successfully filled in by automated systems. All questions had to be responded, to minimize information loss. The study also guaranteed that the teachers who participated would remain anonymous.

We included teachers who worked in at least one state school in MG, in preschool, elementary school, or high school, and worked during the year of 2020. We did not include retired teachers.

The outcome variable – inadequate health habits during the pandemic – was elaborated using six variables that address health habits, as indicated below:

- a. Low fruit intake (no; yes)
- b. Low vegetable intake (no; yes)
- c. Overweight/Obesity (no; yes)
- d. Physical inactivity (no; yes)
- e. Drinking (does not drink; drinks)
- f. Smoking (does not smoke; smokes)

We considered as healthy habits the following recommendations: BMI < 24.9 24.9 Kg/m² (no overweight or obesity); not smoking; not drinking; eating fruit daily; eating vegetables daily; exercising regularly; and not adding salt to meals or foods that are already prepared⁽⁹⁾.

Non adhering to three or more of these habits classified the person in the variable “inadequate health habits”, which was one of the possible outcome variables of this study. The outcome was considered to be positive for a subject when they did not adhere to three or more healthy habits.

Independent variables were organized into blocks, according to subject: “Sociodemographic and economic profile”, “Occupational profile”, and “Questions about COVID-19”.

In the block “sociodemographic and economic profile” we included the variables sex (female; male), age in years (less than 60; 60 or more); census area where the teachers works (rural; urban), decrease in family income during the pandemic (no; yes); and marital status (married; not married).

The block “occupational profile” was formed by the variables time working as a teacher (up to 20 years; 20 years or more); work hours as a teacher per week (less than 40 hours; 40 hours or more); type of contract with the school (selection

process/full teacher; contract/indication); dissatisfaction with teacher work during the pandemic (no; yes); feeling drained with teaching work during the pandemic (no; yes).

Regarding COVID-19-related issues, the variables presented were being a COVID-19 risk group (no; yes); adherence to social distancing (total; partial/none); positive tests for COVID-19 (no; yes); a friend or relative died from COVID-19 (no; yes); and was very afraid of COVID-19 (no; yes). The variable risk group was elaborated using a list of the main risk groups. The response was marked as “yes” if the participant reported belonging to any of the groups in the list. The fear of COVID was measured using the COVID-19 Fear Scale, which had already been validated for Brazil. This is an instrument that investigates the fear people feel from COVID-19. The total score is found by summing up the items (from 7 to 35), and those with a score of 27 or more were classified as being “very afraid”⁽¹⁰⁾.

The software Statistical Package for Social Sciences (SPSS®), version 22.0, was used for data analysis. Simple frequencies and the prevalence of inadequate health habits during the pandemic were presented, as well as independent variables. We also carried out bivariate analyses using Poisson Regression and crude prevalence ratio (PR), with a confidence interval of 95% (CI95%), and p-value. At first, only variables with p-value ≤ 0.20 were selected to form the multiple model using Poisson’s regression, with robust variance. The magnitude of the multiple model associations was estimated using adjusted PR, CI95%, and a significance level of 5% ($\alpha \leq 0.05$). To evaluate the quality of the model, the Deviance test was used. This test evaluates whether the values predicted by the model deviate from the observed values in a way that the Poisson distribution did not predict. If the p-value of the fitness test is higher than the significance level adopted ($\alpha \geq 0.05$), the Poisson regression can be a good fit.

The project was submitted to the Research Ethics Committee of the Universidade Estadual de Montes Claros (Unimontes) under consolidated opinion 4.200.389, and approved on August 7, 2020, CAAE 35982220.0.0000.5146. All participants received a copy from the Informed Consent Form and marked the option “yes” in the question about whether they agreed to participate in the research. The research also complied with Resolution 466/12 of the National Health Council/Ministry of Health, about research with human beings.

RESULTS

The form was accessed by 16,210 teachers. 15,641 of them agreed to participate in the research, an adherence rate of 96.5%. The completion rate was 100%. 81.9% of participants were female, 96.5% had were under 60 years of age, 13.3% worked in rural areas, the family income of 40.9% had decreased during the pandemic. and 66.8% lived with a spouse.

The occupational profile of the teachers showed that 25% had been working for 20 or more years in the profession, 15.8% worked 40 hours or more per week, 54% had been hired through public selection processes or were full teachers, 33.7% were dissatisfied with domestic work during the pandemic, and 36.5% felt exhausted with remote work during the pandemic. Regarding COVID-19 related issues, 35.8% belonged to some risk group for COVID-19, 79.8% fully adhered to social distancing, 1.2% tested positive for COVID-19, 20.5% reported that a friend or family member died of COVID-19, and 43.7% were very afraid of COVID-19.

Among the teachers who participated in the study, 31.1% had inadequate health habits during the COVID-19 pandemic. Table 1 shows the prevalence of all factors evaluated.

Graph 1 shows the distribution of teachers according to the number of adequate behaviors they reported following.

Most of them (28.3%) presented three inadequate health habits during the pandemic (Graph 1).

In the bivariate analysis, the variables sex ($p < 0.001$), age ($p = 0.001$), census area ($p = 0.063$), time at work ($p = 0.013$), weekly working hours ($p < 0.001$), type of contract with the school ($p < 0.001$), job dissatisfaction ($p < 0.001$), COVID-19 risk group ($p = 0.028$), and a being very afraid of COVID-19 ($p = 0.092$) were associated with inadequate health habits during the pandemic at a significance level of 20%. At first, all these variables were selected to form the multiple model (Table 2).

The adjusted analysis showed a higher prevalence of inadequate health habits during the pandemic among men (PR=1.38; 95% CI 1.31;1.45), those aged 60 years or older (PR=1.20; 95% CI 1.07;1.34), who work 40 hours or more during the week (PR=1.10; 95% CI 1.03;1.17), and those who were dissatisfied with work during the pandemic (PR=1.21; 95% CI 1.15;1.27). Protection factors included teachers who had been in the profession for 20 years or more (PR=0.92; 95% CI 0.87;0.98) and those who were hired via contract or indicated to work in the school (PR=0.89; 95% CI 0.85;0.94). The statistics of the Deviance test, obtained from the final multiple model, were equal to 0.715 ($p\text{-value} = 0.690$), suggesting the model had an adequate fit (Table 3).

Table 1 – Frequency of inadequate lifestyle habits regarding the health of teachers during the COVID-19 pandemic (n=15,641). Minas Gerais, Brazil, 2020

Components for inadequate health habits DP	n	%
Low fruit intake	11,106	71.0
Low vegetable intake	8,802	56.3
Overweight/obesity	8,059	51.5
Physical inactivity	6,843	43.8
Drinking	7,589	48.5
Smoking	853	5.5

Source: Study data, 2020.

DP: During the pandemic

*Variation in n due to information loss

#Pregnant women were disregarded in the analysis

Table 2 – Bivariate analysis and crude prevalence ratio of independent variables in relation to inadequate health-related lifestyle habits in teachers during the pandemic (n=15,385). Minas Gerais, Brazil, 2020

Variables	Inadequate health habits during the pandemic		Crude PR (_{95%} CI)	p-value
	No	Yes		
	n (%)	n (%)		
<i>Sociodemographic and economic profile</i>				
Sex				<0,001
Female	8,951 (71.2)	3,624 (28.8)	1.00	
Male	1,656 (58.9)	1,154 (41.1)	1.42 (1.35;1.50)	
Age (years)				0.001
Younger than 60	10,273 (69.2)	4,581 (30.8)	1.00	
60 or older	334 (62.9)	197 (37.1)	1.20 (1.07;1.34)	
Census area				0.063
Rural	1,441 (70.7)	596 (29.3)	1.00	
Urban	9,166 (68.7)	4,182 (31.3)	1.07 (0.99;1.15)	
Decreased household income DP				0.370
No	6,241 (68.7)	2,848 (31.3)	1.00	
Yes	4,366 (69.3)	1,930 (30.7)	0.97 (0.93;1.02)	
Marital status				0.568
Married	7,118 (69.1)	3,184 (30.9)	1.00	
Not married	3,489 (68.6)	1,594 (31.4)	1.01 (0.96;1.06)	
<i>Occupational profile</i>				
Time of work*				0.013
Up to 20 years old	7,858 (68.4)	3,631 (31.6)	1.00	
20 years or more	2,748 (70.6)	1,147 (29.4)	0.93 (0.88;0.98)	
Hours of work per week*				<0.001
Less than 40 hours	9,025 (69.7)	3,922 (30.3)	1.00	
40 hours or more	1,582 (64.9)	854 (35.1)	1.15 (1.09;1.22)	
Type of contract with the school				<0.001
Selection process/full teacher	5,545 (66.7)	2,764 (33.3)	1.00	

Table 2 – Cont.

Variables	Inadequate health habits during the pandemic		Crude PR (95% CI)	p-value
	No	Yes		
	n (%)	n (%)		
Hired via contract/indication	5,062 (71.5)	2,014 (28.5)	0.85 (0.81;0.89)	
Dissatisfaction with work DP				<0.001
No	7,275 (71.3)	2,931 (28.7)	1.00	
Yes	3,332 (64.3)	1,847 (35.7)	1.24 (1.18;1.30)	
Felt exhausted with work DP				0.797
No	6,728 (68.9)	3,041 (31.1)	1.00	
Yes	3,879 (69.1)	1,737 (30.9)	0.99 (0.94;1.04)	
<i>Questions about COVID-19</i>				
COVID-19 risk group				0.028
No	6,867 (69.6)	3,006 (30.4)	1.00	
Yes	3,740 (67.9)	1,772 (32.1)	1.05 (1.00;1.10)	
Adherence to social distancing				0.886
Complete	8,483 (68.9)	3,826 (31.1)	1.00	
Partial/None	2,124 (69.1)	952 (30.9)	0.99 (0.93;1.05)	
Positive COVID-19 test				0.360
No	10,475 (68.9)	4,727 (31.1)	1.00	
Yes	132 (72.1)	51 (27.9)	0.89 (0.70;1.13)	
Lost a relative or friend to COVID-19				0.716
No	8,443 (69.0)	3,791 (31.0)	1.00	
Yes	2,164 (68.7)	987 (31.3)	1.01 (0.95;1.07)	
Felt very afraid of COVID-19				0.092
No	5,908 (68.4)	2,731 (31.6)	1.00	
Yes	4,699 (69.7)	2,047 (30.3)	0.96 (0.91;1.00)	

Source: Study data, 2020.

PR: Prevalence Ratio

CI95%: Confidence interval of 95%

p-value: Wald test

DP: During the pandemic

*Variation in n due to information loss

Table 3 – Crude association of independent variables and inadequate lifestyle habits related to health among teachers (n=15,385). Minas Gerais, Brazil, 2020

Variables	Adjusted PR (95% CI)	p-value
<i>Sociodemographic and economic profile</i>		
Sex		<0.001
Female	1.00	
Male	1.38 (1.31;1.45)	
Age (years)		0.002
Younger than 60	1.00	
60 or older	1.20 (1.07;1.34)	
<i>Occupational profile</i>		
Time of work*		0.008
Up to 20 years old	1.00	
20 years or more	0.92 (0.87;0.98)	
Hours of work per week*		0.002
Less than 40 hours	1.00	
40 hours or more	1.10 (1.03;1.17)	
Type of contract with the school		<0.001
Selection process/full teacher	1.00	
Hired via contract/indication	0.89 (0.85;0.94)	
Dissatisfaction with work DP		<0.001
No	1.00	
Yes	1.21 (1.15;1.27)	
<i>Deviance: 0.715/p-value: 0.690</i>		

Source: Study data, 2020.

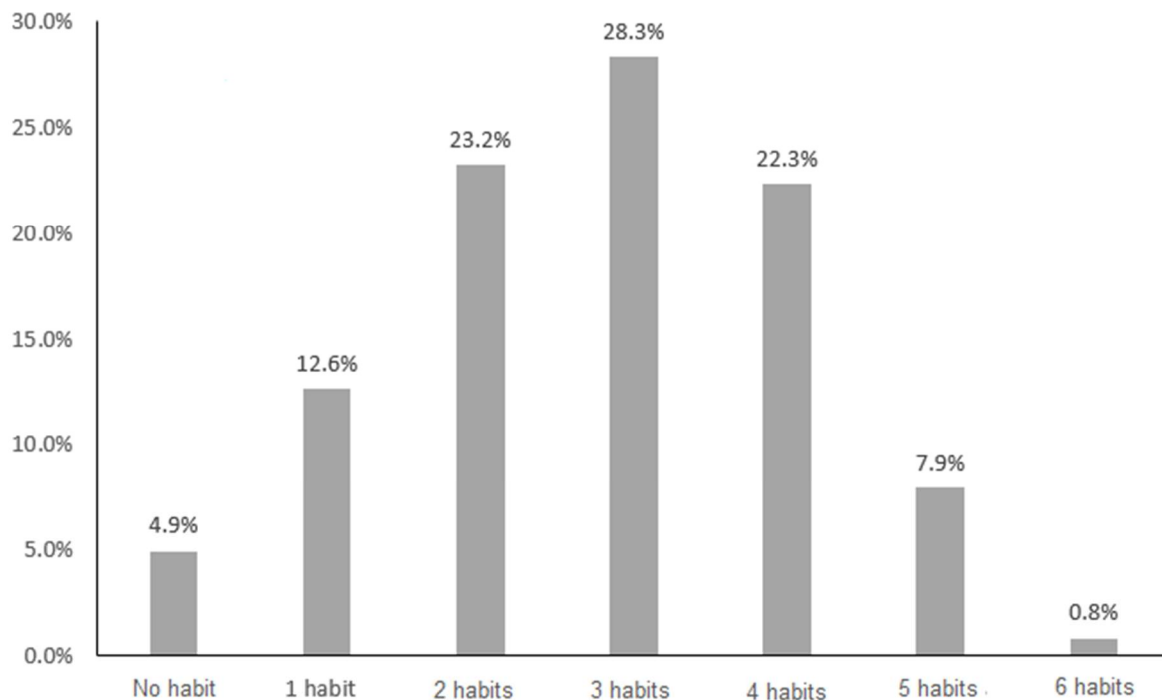
PR: Prevalence Ratio

CI95%: Confidence interval of 95%

p-value: Wald test

DP: During the pandemic

*Variation in n due to information loss



Graph 1 – Distribution of teachers during the COVID-19 pandemic according to the number of inadequate health-related lifestyle habits (n=15,385). Minas Gerais, Brazil, 2020
Source: Study data, 2020.

DISCUSSION

One third of the teachers evaluated during the COVID-19 pandemic showed inadequate health habits. Approximately half of the respondents reported low consumption of vegetables, were overweight or obese, physically inactivity, and consumed alcohol. Most teachers reported seldom eating fruit, but the minority smoked. These habits can have a negative impact on the quality of life of these professionals. A survey carried out in 35 European countries showed an association between adequate working conditions and workers' health⁽¹¹⁾ The relationship between health and work in the school context can lead teachers to have recurring illnesses and have a negative impact on their work capacity^(3,12,13).

During the COVID-19 pandemic, quarantine and isolation were important strategies to control the dissemination of the disease. A study in China showed that social distancing measures contributed to reducing the spread of COVID-19 infection, with a significant impact on reducing mortality⁽¹⁴⁾. In Brazil, a previous investigation showed that an expressive portion of teachers adhered to social isolation measures, and this practice was associated to sociodemographic

characteristics, occupational factors, and health conditions of these education professionals⁽¹⁵⁾.

Lifestyle changes in this period led people to exercise less, contributing to developing a sedentary lifestyle and obesity/overweight⁽⁴⁾. A study in northern Italy, on the health and behavior of adult individuals during the COVID-19 pandemic, found a 68% reduction in physical activity in people who were considered active before the implementation of restrictive measures⁽¹⁶⁾.

In this study, the teachers interviewed seldom consumed fruits and vegetables. Social isolation interfered with their dietary habits. This can increase the risk of being overweight in this occupational group⁽¹⁷⁾. An investigation with adults in Italy also showed the adoption of unhealthy dietary profiles⁽¹⁸⁾. Respondents reported increased food consumption, motivated by the wish to improve well-being.

Alcohol consumption was prevalent among the teachers investigated here. This habit can be recreational or used to reduce stressing physical and mental symptoms from daily life, especially those related with changes in their work process during the COVID-19 pandemic^(19,20). An international investigation with adults living in countries such as

Belgium, France, and Canada, found changes in alcohol consumption during the crisis, showing that anxious and depressed persons were more susceptible to changes in their habits⁽¹⁹⁾.

The analysis of factors associated with inadequate health habits showed that this behavior was more prevalent in male teachers over 60. This result is in line with that from another study in the adult population, which showed changes in lifestyle habits during the period of social distancing provoked by the pandemic. This period showed a significant presence of inadequate life habits, such as foods with low nutritional value, sedentary lifestyle, and obesity/overweight⁽⁴⁾. A study carried out before the pandemic showed that male teachers are more likely to have arterial hypertension⁽²¹⁾. Men, when compared to women, resist the use of health care. The pandemic and the emergence of other external preoccupations (money, disease, and death) may have worsened this tendency.

The prevalence of inadequate habits was higher in teachers who worked 40 or more hours per week. Before the COVID-19 pandemic, teacher work was already often carried out in a precarious context, due to work journeys and conditions that can contribute to the development of an unhealthy lifestyle⁽²²⁾.

Regarding time as teachers, working in the profession for more than 20 years was a protective factor against inadequate health habits. A study that explored the meaning of work, as experienced by teachers who had different types of contract, showed how important teaching is for these workers, who attributed to their work the feeling of being alive, feeling younger, feeling accomplished, and feeling pleasure to contribute and to be part of society⁽²³⁾. These aspects provide a positive contribution for more experienced teachers to deal with the crisis that was the pandemic.

Here, we found that teachers with regular contracts or indications to schools had healthier habits. This corroborates a study that evaluated quality of life at work and the quality of life of teachers with different work regimens⁽²⁴⁾. Results suggest that teachers with regular work contracts demand less from the work conditions provided by the institutions due to the fact these contracts, in the Brazilian context, are shorter. These teachers expect to spend less time in this role and are aware that poor work conditions will not last long. Furthermore, they tend to be in the earlier stages of their careers, entering the job market to search for professional experiences. They also have a lower weekly workload. Therefore, their working conditions do not influence their quality of life and healthy habits as much.

Professors from selected processes/full professors have been in this role for longer and, as a result, demand a better infrastructure as necessary for the performance of their work. They spend more time under the same working conditions and risk factors, which affects their quality of life and is intrinsically related to healthy lifestyle habits. For these researchers, the more the time teachers devote to teaching, the less the time they have for leisure, family, and domestic chores, and, consequently, the less the time they dedicate to their own health⁽²⁴⁾.

During the COVID-19 pandemic, schools were closed, and digital technologies were used to continue the education of Brazilians. This caused profound changes in the way people interacted professionally and socially. Some teachers, unable to skillfully use these technologies, found it difficult to adapt to distance teaching. Teacher work conditions, which were already seen as hostile before the pandemic started⁽³⁾, may have been made worse in this period.

Work dissatisfaction was associated with the outcome variable. The phenomenon of "school fatigue" is described as the sum of negative experiences teachers dealt with during the pandemic, as they carried out their work, leading to physical and mental exhaustion. A previous investigation with teachers found that those who were dissatisfied with their work were more likely to be affected by Burnout Syndrome⁽²⁵⁾.

According to the Pan American Health Organization (PAHO) and the World Health Organization (WHO), the concept of health is defined as the complete physical, mental and social well-being of a person⁽²⁶⁾. Adopting a healthy lifestyle can substantially reduce premature mortality and increase the life expectancy of a population. A previous investigation with the United States population estimated that adhering to five factors associated with low-risk lifestyles at 50 years old could increase life expectancy in 14.0 and 12.2 years for females and males, respectively⁽²⁷⁾. Various aspects of the COVID-19 pandemic, as the results of this study show, had an effect on the health-disease process of teachers.

An analysis of the health profile of educators is essential to understand the situations to which this group was exposed during the pandemic, as well as their potential long-term implications. The results of this study may support the implementation of measures to improve our understanding of the impact of the pandemic on teachers' health. The development and application of public policies aimed at improving technological and methodological support, as well as social care, are support measures to minimize the impact of the pandemic on the physical, mental, and social wellbeing of the teachers.

A limitation of this study is the fact that its data was collected using self-reports, which in general are susceptible to memory bias. Data collection on the internet also may lead to selection bias, since participants must have internet access. However, internet research is promising due to its low cost, broad geographical coverage, and the possibility of knowing the health conditions of the population in real time. Brazilian Basic Education teachers are quite heterogeneous with regard to working conditions, considering the type of school, their education level, and the profile of the students distributed in the Brazilian territory ⁽¹²⁾.

This study may contribute to the implementation of software or interventions to support the adoption of a healthy lifestyle among teachers. Workplace wellbeing programs can provide information and education about how to adapt to healthy lifestyles, especially regarding appropriate eating habits and physical activities, to prevent and manage modifiable risk factors for NCCDs. The adoption of strategies to promote the health of this group can impact their health, occupational performance, and influence the adoption of healthy habits in their students.

CONCLUSION

The results of this study showed that, during the COVID-19 pandemic, teachers from Minas Gerais presented inadequate health-related lifestyle habits regarding nutrition, exercise, overweight/obesity, drinking, and smoking, when associated with sex, age, and work-related sociodemographic factors. The investigation showed that more than half the teachers interviewed had a low intake of fruits and vegetables. Also, approximately half of them drank and met the criteria of overweight/obesity and physical inactivity, and, although the number of smokers was less expressive, it is no less important. Inadequate health habits were associated with sex, age, and work-related sociodemographic characteristics of teachers.

An analysis of the lifestyle profile related to the health of teachers can help plan strategies to promote the health of these workers and, therefore, can assist in making decisions about their individual lifestyles. The health and wellbeing of teachers is fundamental for a quality education and the development of the country.

We suggest further longitudinal research to assess the health conditions of teachers. We also recommend, for future investigations, data collection processes involving teachers who work in different settings, due to the importance of ascertaining the health conditions of these workers in Brazil.

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■ **Authorship contribution:**

Project administration: Desirée Sant’Ana Haikal.

Formal analysis: Nayra Suze Souza e Silva, Lucinéia de Pinho.

Writing – original draft: Alexandre dos Reis Vieira, Jorge Luiz Bento de Andrade Junior, Lucas Linhares Costa, Rafaela Borges Teixeira, Vinicius de Paula Arruda Vieira.

Writing – proof reading and editing: Rosângela Ramos Veloso Silva, Desirée Sant’Ana Haikal, Lucinéia de Pinho.

Investigation: Alexandre dos Reis Vieira, Jorge Luiz Bento de Andrade Junior, Lucas Linhares Costa, Rafaela Borges Teixeira, Vinicius de Paula Arruda Vieira, Tatiana Almeida de Magalhães, Nayra Suze Souza e Silva, Desirée Sant’Ana Haikal, Rosângela Ramos Veloso Silva, Lucinéia de Pinho.

Methodology: Alexandre dos Reis Vieira, Jorge Luiz Bento de Andrade Junior, Lucas Linhares Costa, Rafaela Borges Teixeira, Vinicius de Paula Arruda Vieira, Tatiana Almeida de Magalhães, Nayra Suze Souza e Silva, Desirée Sant’Ana Haikal, Rosângela Ramos Veloso Silva, Lucinéia de Pinho.

Acquisition of funds: Desirée Sant’Ana Haikal.

Supervision: Lucinéia de Pinho.

Visualization: Alexandre dos Reis Vieira, Jorge Luiz Bento de Andrade Junior, Lucas Linhares Costa, Rafaela Borges Teixeira, Vinicius de Paula Arruda Vieira, Tatiana Almeida de Magalhães, Nayra Suze Souza e Silva, Desirée Sant’Ana Haikal, Rosângela Ramos Veloso Silva, Lucinéia de Pinho.

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■ **Corresponding author:**

Lucineia de Pinho

E-mail: lucineiapinho@hotmail.com

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